

**DECLARATION
AND POWER OF ATTORNEY**
Original Application

ATTORNEY'S DOCKET NO.
D-21413

As a below named inventor, I declare that I have reviewed and understand the contents of the specification, including the claims, as amended by any amendment specifically referred to in this Declaration, that the information given herein is true, that I believe that I am the original, first and sole inventor if only one name is listed at 201 below, or a joint inventor if plural inventors are named below at 201 et seq., of the invention entitled:

**CRYOCOOLER SYSTEM WITH FREQUENCY MODULATING
MECHANICAL RESONATOR**

which is described and claimed in:

- the attached specification or
 the specification in application Serial No. _____ filed _____ amended _____
 (for declaration not accompanying application) (Day, Month, Year) (Day, Month, Year)

that I acknowledge a duty to disclose information I am aware of which is material to the patentability of this application in accordance with 37 CFR 1.56(a), that I do not know and do not believe that the same was ever known or used in the United States of America before my or our invention thereof or patented or described in any printed publication in any country before my or our invention thereof, or more than one year prior to this application, or in public use or on sale in the United States of America more than one year prior to this application, that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months prior to this application and that as to applications for patent or inventor's certificate filed by me or my legal representatives or assigns in any country foreign to the United States of America, the earliest filed foreign application(s) filed within twelve months prior to the filing date of this application and all foreign applications filed more than twelve months prior to the filing date of this application are identified at 600, and, as required, 601 below.

| | |
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| 600 | CHECK APPROPRIATE BOX: <input checked="" type="checkbox"/> No earlier-filed applications <input type="checkbox"/> Required information as to foreign applications filed prior to filing date of this application is at 601 on page 2 attached hereto and made a part hereof. |
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POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (*List name and registration number*)

| | | | |
|------------------|----------------|--------------------|----------------|
| Donald T. Black | Reg. No. 27999 | David M. Rosenblum | Reg. No. 29341 |
| Gerald L. Coon | Reg. No. 29910 | Iurie A. Schwartz | Reg. No. 43909 |
| Stanley Ktorides | Reg. No. 29399 | Steven T. Trinker | Reg. No. 28274 |

| SEND CORRESPONDENCE TO: | | DIRECT TELEPHONE CALLS TO: | | |
|--|--|---------------------------------|--|--|
| PRAXAIR TECHNOLOGY, INC. Law Department M1-557 39 Old Ridgebury Road Danbury, CT 06810-5113 | | Stanley Ktorides (203) 837-2178 | | |

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| 201 | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">FULL NAME OF INVENTOR</td> <td style="width: 35%;">LAST NAME</td> <td style="width: 35%;">FIRST NAME</td> <td style="width: 25%;">MIDDLE NAME</td> </tr> <tr> <td>ACHARYA</td> <td>ARUN</td> <td></td> <td></td> </tr> <tr> <td>RESIDENCE & CITIZENSHIP</td> <td>CITY</td> <td>STATE OR FOREIGN COUNTRY</td> <td>COUNTRY OF CITIZENSHIP</td> </tr> <tr> <td></td> <td>East Amherst</td> <td>New York</td> <td>USA</td> </tr> <tr> <td>POST OFFICE ADDRESS</td> <td>POST OFFICE ADDRESS</td> <td>CITY</td> <td>STATE OR COUNTRY ZIP CODE</td> </tr> <tr> <td></td> <td>85 Twilight Lane</td> <td>East Amherst</td> <td>New York 14151</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">FULL NAME OF INVENTOR</td> <td style="width: 35%;">LAST NAME</td> <td style="width: 35%;">FIRST NAME</td> <td style="width: 25%;">MIDDLE NAME</td> </tr> <tr> <td>ARMAN</td> <td>BAYRAM</td> <td></td> <td></td> </tr> <tr> <td>RESIDENCE & CITIZENSHIP</td> <td>CITY</td> <td>STATE OR FOREIGN COUNTRY</td> <td>COUNTRY OF CITIZENSHIP</td> </tr> <tr> <td></td> <td>Grand Island</td> <td>New York</td> <td>USA</td> </tr> <tr> <td>POST OFFICE ADDRESS</td> <td>POST OFFICE ADDRESS</td> <td>CITY</td> <td>STATE OR COUNTRY ZIP CODE</td> </tr> <tr> <td></td> <td>16 The Commons</td> <td>Grand Island</td> <td>New York 14072</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">FULL NAME OF INVENTOR</td> <td style="width: 35%;">LAST NAME</td> <td style="width: 35%;">FIRST NAME</td> <td style="width: 25%;">MIDDLE NAME</td> </tr> <tr> <td>FITZGERALD</td> <td>RICHARD</td> <td></td> <td>C.</td> </tr> <tr> <td>RESIDENCE & CITIZENSHIP</td> <td>CITY</td> <td>STATE OR FOREIGN COUNTRY</td> <td>COUNTRY OF CITIZENSHIP</td> </tr> <tr> <td></td> <td>Grand Island</td> <td>New York</td> <td>USA</td> </tr> <tr> <td>POST OFFICE ADDRESS</td> <td>POST OFFICE ADDRESS</td> <td>CITY</td> <td>STATE OR COUNTRY ZIP CODE</td> </tr> <tr> <td></td> <td>5221 East Park Drive</td> <td>Grand Island</td> <td>New York 14072</td> </tr> </table> | FULL NAME OF INVENTOR | LAST NAME | FIRST NAME | MIDDLE NAME | ACHARYA | ARUN | | | RESIDENCE & CITIZENSHIP | CITY | STATE OR FOREIGN COUNTRY | COUNTRY OF CITIZENSHIP | | East Amherst | New York | USA | POST OFFICE ADDRESS | POST OFFICE ADDRESS | CITY | STATE OR COUNTRY ZIP CODE | | 85 Twilight Lane | East Amherst | New York 14151 | FULL NAME OF INVENTOR | LAST NAME | FIRST NAME | MIDDLE NAME | ARMAN | BAYRAM | | | RESIDENCE & CITIZENSHIP | CITY | STATE OR FOREIGN COUNTRY | COUNTRY OF CITIZENSHIP | | Grand Island | New York | USA | POST OFFICE ADDRESS | POST OFFICE ADDRESS | CITY | STATE OR COUNTRY ZIP CODE | | 16 The Commons | Grand Island | New York 14072 | FULL NAME OF INVENTOR | LAST NAME | FIRST NAME | MIDDLE NAME | FITZGERALD | RICHARD | | C. | RESIDENCE & CITIZENSHIP | CITY | STATE OR FOREIGN COUNTRY | COUNTRY OF CITIZENSHIP | | Grand Island | New York | USA | POST OFFICE ADDRESS | POST OFFICE ADDRESS | CITY | STATE OR COUNTRY ZIP CODE | | 5221 East Park Drive | Grand Island | New York 14072 |
| FULL NAME OF INVENTOR | LAST NAME | FIRST NAME | MIDDLE NAME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ACHARYA | ARUN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | East Amherst | New York | USA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POST OFFICE ADDRESS | POST OFFICE ADDRESS | CITY | STATE OR COUNTRY ZIP CODE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 85 Twilight Lane | East Amherst | New York 14151 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FULL NAME OF INVENTOR | LAST NAME | FIRST NAME | MIDDLE NAME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ARMAN | BAYRAM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | Grand Island | New York | USA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 16 The Commons | Grand Island | New York 14072 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| FITZGERALD | RICHARD | | C. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | Grand Island | New York | USA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 5221 East Park Drive | Grand Island | New York 14072 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 202 | <input checked="" type="checkbox"/> Additional matter on page 2 attached hereto and made a part hereof. When page 2 is used, all signatures must be signed on page 2+3. List of Applicants continued on page 2 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 203 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statement and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

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|---------------------------|---------------------------|---------------------------|
| SIGNATURE OF INVENTOR 201 | SIGNATURE OF INVENTOR 202 | SIGNATURE OF INVENTOR 203 |
| Hem Acharya | Bayram Arman | Richard Fitzgerald |
| DATE | DATE | DATE |
| 3-26-04 | 3/26/04 | 26 MARCH 2004 |

**DECLARATION
AND POWER OF ATTORNEY**

Original Application

Page 2 (If Required)

ATTORNEY'S DOCKET NO.
D-21413

LISTING OF APPLICANTS - continued from Page 1.

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|-----|-------------------------|----------------------------|--------------------------------------|--|
| 204 | FULL NAME OF INVENTOR | LAST NAME VOLK | FIRST NAME JAMES | MIDDLE NAME JOSEPH |
| | RESIDENCE & CITIZENSHIP | CITY Clarence | STATE OR FOREIGN COUNTRY New York | COUNTRY OF CITIZENSHIP USA |
| | POST OFFICE ADDRESS | 4384 Homestead Lane | CITY Clarence | STATE OR COUNTRY New York ZIP CODE 14031 |
| 205 | FULL NAME OF INVENTOR | LAST NAME ROYAL | FIRST NAME JOHN | MIDDLE NAME HENRI |
| | RESIDENCE & CITIZENSHIP | CITY Grand Island | STATE OR FOREIGN COUNTRY New York | COUNTRY OF CITIZENSHIP USA |
| | POST OFFICE ADDRESS | 102 Settlers Row | CITY Grand Island | STATE OR COUNTRY New York ZIP CODE 14072 |
| 206 | FULL NAME OF INVENTOR | LAST NAME HAMILTON | FIRST NAME AL-KHALIQUE | MIDDLE NAME SHARIFF |
| | RESIDENCE & CITIZENSHIP | CITY Grand Island | STATE OR FOREIGN COUNTRY New York | COUNTRY OF CITIZENSHIP USA |
| | POST OFFICE ADDRESS | 2233 Bedell Road, Apt. #10 | CITY Grand Island | STATE OR COUNTRY New York ZIP CODE 14072 |

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| SIGNATURE OF INVENTOR 201 | SIGNATURE OF INVENTOR 202 | SIGNATURE OF INVENTOR 203 |
|--|--|---|
|  DATE 3-26-04 |  DATE 3/26/04 |  DATE 26 MARCH 2004 |
| SIGNATURE OF INVENTOR 204 | SIGNATURE OF INVENTOR 205 | SIGNATURE OF INVENTOR 206 |
| DATE | DATE 3-26-04 | DATE 3 - 26 - 04 |

FOR SOLE AND JOINT APPLICATIONS

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Original Application
Page 3 (If Required)

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D-21413

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|--|--|--------------------|--------------------------------------|--|
| 601 | LISTING OF EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED WITHIN 12 MONTHS PRIOR TO THE U.S. FILING DATE OF THIS APPLICATION. LIST ALL APPLICATIONS FILED ON DATE OF FIRST FILING, IF MORE THAN ONE (1). | | | |
| | COUNTRY | APPLICATION NUMBER | DATE OF FILING (DAY, MONTH, YEAR) | PRIORITY OF WHICH IS CLAIMED UNDER 35 USC 119 |
| | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| | | | | <input type="checkbox"/> YES <input type="checkbox"/> NO |
| Listing of All Foreign Applications Filed, if any, MORE THAN TWELVE MONTHS PRIOR, to U.S. Filing Date of this Application. | | | | |
| | COUNTRY | APPLICATION NUMBER | DATE OF FILING (DAY, MONTH, YEAR) | |
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LISTING OF APPLICANTS - continued from Page 1.

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| 204 | FULL NAME OF INVENTOR | LAST NAME VOLK | FIRST NAME JAMES | MIDDLE NAME JOSEPH |
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| DATE | DATE | DATE |
| SIGNATURE OF INVENTOR 204 | SIGNATURE OF INVENTOR 205 | SIGNATURE OF INVENTOR 206 |
| <i>James Joseph Volk</i> 3-24-04 | | |
| DATE | DATE | DATE |

FOR SOLE AND JOINT APPLICATIONS